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DIVISION OF INDUSTRIAL HYGIENE  
OHIO STATE BOARD OF HEALTH  
ARE YOU IN BUSINESS FOR YOUR HEALTH?







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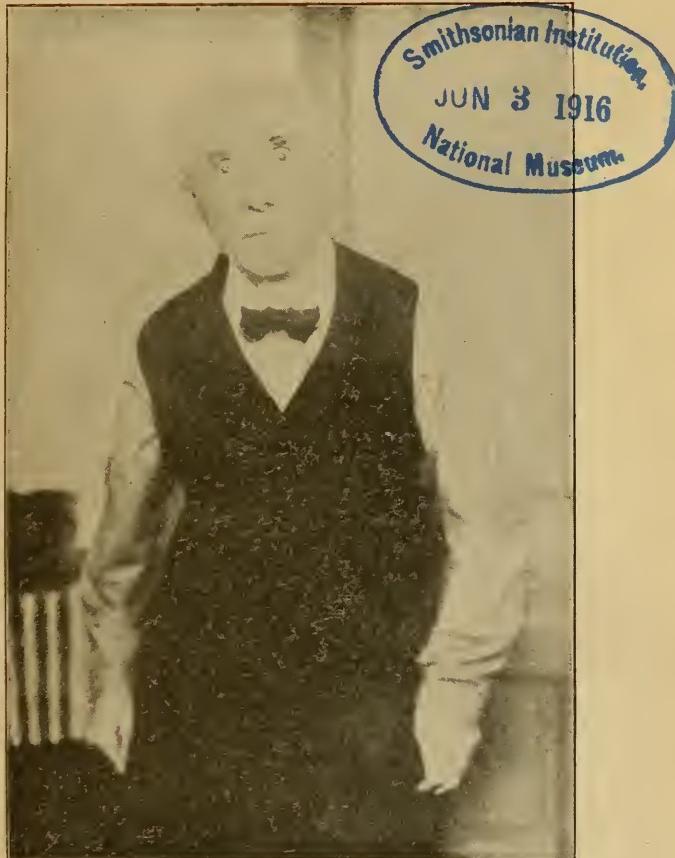
# Are You In Business For Your Health?

IF NOT, YOU OUGHT TO BE

A QUESTION WHICH MEANS

## A Great Saving to Employer and Worker Alike

**STANDARDS to be Observed in Developing Personal  
EFFICIENCY AND PRODUCTION**



OLD AGE TWENTY YEARS TOO SOON

**WHY?**

Third (revised) edition. Issued March, 1916.

DIVISION OF INDUSTRIAL HYGIENE—OHIO STATE BOARD OF HEALTH  
E. F. McCAMPBELL, Ph.D., M.D., Secretary and Executive Officer, Columbus, Ohio

## THE SITUATION

PREVENTABLE DISEASES take off 43% of all workers.  
EXCEPT THE FARMER only 13% of occupied persons reach the age of 70 years.  
THE CHANCES OF LIVING as long as our fathers are steadily decreasing for all  
who have reached 40 years of age.  
HEART DISEASES cause, in Ohio, one-seventh of all deaths. Over half occur  
before the allotted 70 years of life. One-fourth occur before 50 years of age.  
Deaths from Heart Diseases are increasing at the rate of over 5% annually.  
ALL FORMS OF CHRONIC DISEASES are more PREVALENT in America than  
anywhere else in the civilized world. They are also INCREASING more  
rapidly in America than in any civilized country in the world.

## THE CAUSES

- I. Forgetting personal hygiene or the LAWS OF HEALTH in the midst of greater civilization.
- II. Personal ignorance of ONE'S OWN SELF, as made known by physical examinations.
- III. Presence of DANGERS IN THE SURROUNDINGS which cause sickness or add to sickness already present. These dangers are constantly increasing as time and civilization go on.
- IV. No help when once down, or LACK OF INSURANCE PROTECTION.

## THE CURE

- I. LAWS OF HEALTH — Fifteen in Number: Consult "How to Live" by Fisher and Fisk,  
The Life Extension Institute, N. Y. City.
  1. Ventilate every room you occupy.
  2. Wear lightweight, loose and porous clothes.
  3. Get out of doors. Recreate, do not dissipate.
  4. Breathe night-air at night time — open your bed-room windows.
  5. Breathe deeply — 100 times each day.
  6. Avoid over-eating and over-weight.
  7. Eat sparingly of meat and eggs.
  8. Eat some hard, some bulky and some raw foods, especially vegetables and fruits.
  9. Eat the first three mouthfuls slowly. Eat the balance slowly. Drink water principally between meals.
  10. Go to stool regularly and frequently.
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HAZARDS—(Continued.)

HUMIDITY: Water, steam, vapors, dampness; confined dampness or dryness; promotes injuries, sickness and inefficiency.....

ILLUMINATION: Obstructed surroundings, limited window space, lighting (AEGO and by process); shadows, contrasts, flickering, glare, brilliancy, colors; poor shades, eye shades, goggles, helmets, screens; dark-room work; tacking light source; promotes sickness, injuries, inefficiency.....

AIR: Stagnation, room temperature (high?), humidity (low?); fine dust, smoke; leaks of gas, vapors, fumes; open fires, gas flames; very close confinement; promotes sickness, and inefficiency.....

HEAT: Insufficient protection, rest intervals, drinking facilities, showers, baths, lockers, change rooms, clothes-drying quarters; long hours; permitting undue exposure; promotes sickness, injuries and inefficiency.....

COLD: Insufficient heating, clothing; drafts, inactive work, alternations with heat, outdoor closets; weather exposure; basement work; promotes sickness and inefficiency.....

FATIGUE: Laborious work, long hours, piece work, speeding up, monotony, constant standing, prolonged strains, chairs without backs, faulty postures, hard floors, jarring processes, pressures against body, eye strain, noise; insufficient rest periods, female quarters, variations, rotations.....

INACTIVITY: Sedentary work, limited movements, mental concentration, confined work space.....

PRESSURES: Caisson work, diving, high altitude, concussion. ODORS: Sickening. ELECTRICITY: .....

INFECTIONS: Materials..... insects, animals, persons; mouthed articles, short intervalled handling of objects, wiping rags, oil; frequent trivial injuries, burns, flying particles; proximity to others, spitting on floors, common towels, cups; insufficient wash places, closets, gloves, goggles, cuspidors, rules, medical care, physical exams, first aid, hospital arrangements.....

Venerel diseases: suggestive pictures, writings, language—especially where sexes work together.....

POISONS: Name and form..... amt. of risk, worker ignorant, careless; instructions insufficient, disregarded, wrongf<sup>ul</sup>, harmful; mislabeling; eating at work, in work room; mustache, beard, indifference, medical supervision, gloves, respirators, clothes, lockers, washing facilities, lunch room.....

Mechanical protection..... work variation, rotation.....

THIRST: Drinking water not good, or convenient, or properly cooled, improper beverages preferred.....

ALCOHOLISM AND DESIRE FOR STIMULANTS: Thirst, dust, fatigue, tradition, habit, physical weakness; permitted during work; saloons near, ignorance of effects; no home gardens, no efficiency department.....

Signed.....

N. B. In addition to the marks X, XX, and XXX, use L for hazards which are due to the Locality (or neighborhood), and S for hazards which belong to the Space (or work room) in which the work is done. All other hazards are presumed to be due to the nature of the Process itself.

STATE DEPARTMENT OF HEALTH--DIVISION OF INDUSTRIAL HYGIENE  
PERSONAL HEALTH DATA

Note: Use X for slight defect; XX, more marked; XXX, very marked; R, right, L, left, as required.

IDENTIFICATION: Name..... Surname.....

Age..... Sex..... M. S. W. D.

Apparent age..... Height..... Weight..... Posture..... Gait.....

Degree of intelligence..... Ability to understand English.....

PREVIOUS ILLNESS: Medical or surgical attention, especially since 12 yrs. of age, such as:

Health migrations..... Venereal diseases.....

PRESENT HEALTH (Complaints):.....

HABITS: { Present..... Past.....

Alcohol..... Tobacco..... Coffee..... Tea..... Drugs..... Gun.....

FAMILY:..... Tuberculosis..... Diabetes..... Arterial disease.....

INTEREST:..... In own health.....

PHYSICAL EXAM.—HEAD:..... Gray hair..... Parasites..... Scalp disease..... Deformity.....

EYES (Snellen Chart):..... Without glasses.....

With glasses.....

Squint..... Proptosis..... Diplopia..... Nystagmus..... Increased tension..... Lid reflex.....

Icterus..... Pallor..... Injection..... Pterygium..... Pupils: unequal, contracted, dilated, irregular, opacity, reflexes.....

EARS:..... Hearing..... Wax..... Cotton..... Discharge..... Odor..... LIPS:.....

NOSE:..... Obstructed breathing..... Nasal voice..... Ozeana..... Deformity..... Eczema.....

TEETH:..... Tartar..... Caries..... Irregularity..... Malocclusion..... Absence.....

GUMS:..... Retraction..... Redness..... Pyorrhoea..... Atrophy..... TONGUE:..... Odor.....

PALATE:..... UVULA:..... Discolor..... Coated..... Defects..... Movements.....

TONSILS:..... VOICE:.....

PHARYNX:.....

(OVER)

DATE..... ADDRESS..... NO. .... STREET.....

GIVEN NAME..... NATIVITY OF PARENTS..... RELIGION..... DATE OF IMMIGRATION..... TIME IN THIS VICINITY.....

GROSS DEFORMITY..... APPARENT GENERAL CONDITION OF HEALTH.....

MUTILATIONS..... FRACTURES..... CURES.....

DRUGS..... GUN..... INSANITY.....

MISCELLANEOUS.....

COLOR BLINDNESS.....

DEFORMITY..... DISEASE..... PUFFINESS.....

SCARS..... DEFECTS.....

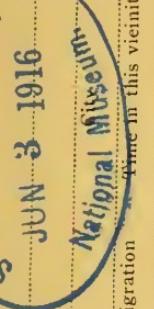
DEFECTS..... DENTAL WORK.....

USE OF BRUSH.....

MOVEMENTS.....

VOICE:..... TEMPERATURE:.....

(OVER)





**OHIO STATE BOARD OF HEALTH****CERTIFICATE OF INDUSTRIAL DISEASE****NAME OF PATIENT****ADDRESS:** Street and No.

City or Village

**PERSONAL AND STATISTICAL PARTICULARS**

Sex	Age	Color	Country of birth
Single, married, widowed or divorced (write the word)			

**Occupation**

(a) Present trade, profession or work

Particular kind of work in such trade, etc.

Date of entering present occupation

Employer's name

Address

Business (kind of goods made or work done)

**Diagnosis of present illness**

Chief symptoms and conditions

**Date first symptoms appeared**

Complicating Diseases (such as alcoholism, syphilis, tuberculosis, etc.)

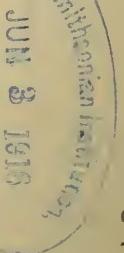
**Additional facts****Year****191 \_\_\_\_\_****(Signed) \_\_\_\_\_, M. D.****191 \_\_\_\_\_ (Address) \_\_\_\_\_****WRITE PLAINLY WITH INK—THIS IS A PERMANENT RECORD**

N. B.—Every item of information should be carefully supplied. The exact statement of OCCUPATION is very important. Physicians should state DIAGNOSIS in plain terms. See instructions on back of certificate.

Mail to STATE BOARD OF HEALTH, Hartman Building, Columbus. (Over)

# OHIO STATE BOARD OF HEALTH

COLUMBUS



## AN ACT — To Require the Reporting of Certain Occupational Diseases — (Passed March 25, 1913.)

SECTION 1. Every physician in this state attending on or called in to visit a patient whom he believes to be suffering from poisoning from lead, phosphorus, arsenic, brass, wood-alcohol, mercury or their compounds, or from antirax, or from compressed-air illness, or any other ailment or disease, contracted as a result of the nature of the patient's employment, shall within forty-eight hours of first attending such patient send to the State Board of Health a report stating:

- (a) Name, address and occupation of patient. (b) Name, address and business of employer. (c) Nature of disease.

The reports herein required shall be made on, or in conformity with, the standard schedule blanks hereinafter provided for. The mailing of the report, within the time required, in a stamped envelope addressed to the office of the State Board of Health, shall be a compliance with this section.

Section 3. Reports made under this act shall not be evidence of the facts therein stated in any action arising out of the disease therein reported.

## AN ACT — For the Prevention of Occupational Diseases with Special Reference to Lead Poisoning.

SECTION 7. Every physician \* \* \* \* \* finding what he believes to be symptoms of lead poisoning shall \* \* \* \* \* within forty-eight hours after such examination and finding \* \* \* \* \* send a report thereof in duplicate, one copy to the State Department of Factory Inspection and one to the State Board of Health. \* \* \* \* \* The examining physician shall also, within the said forty-eight hours, report such examination and finding to the employer. (Passed April 18, 1913.)

These forms are furnished by the State Board of Health and should be used for all reports. In filling out, note carefully the instructions below.

## INSTRUCTIONS FOR FILLING OUT CERTIFICATE

**In General.** The *medical certificate* on the right hand side the physician alone can furnish. The *personal and statistical particulars* on the left hand side must be secured by the physician either from the patient, or, in fatal cases, from the family precisely as for similar information in certificates of death sent to boards of health.

**Present Occupation.** Precise statement of occupation is very important so that the relative healthfulness of various pursuits may be known. It is necessary to know both general trade or profession (for example, *printer* or *brass worker*) and also the particular kind of work or branch of the trade (as *hand compositor* or *hototype operator* for a printer, or *polisher* or *buffer* for a brass worker).

*Date of entering present occupation* is important to determine how long the worker may have been exposed to the hazard before contracting the disease.

*Employer's name, address and business* are necessary to ascertain distribution of occupational diseases by industries, many trades (e. g., machinists) being common to different industries.

**Previous Occupations** need to be known, if possible, because present illness may be due to a former rather than present occupation, and industrial disease is frequently a cause of change of

occupation. Give simply the name of each distinct occupation which the patient may have followed, with the year he entered and the year he left.

**Previous Illnesses.** This refers either to previous attacks of present disease, or to any other disease, *due to occupation*. All that is required is the name of each such disease or illness with the year in which it occurred. Such information, when it can be secured, will show whether the case reported is the first attack or not, and when combined with statement of previous occupations, will afford an outline history of the patient as to occupational disease.

**Medical Certificate.** Only the last two items specified for this require any explanation. In making these reports it is necessary to consider the possible influence of factors other than occupation as causes of the disease. For this reason any *complicating diseases* should be noted, such, for example, as alcoholism or syphilis in connection with arteriosclerosis in cases of lead or other metal poisoning. The possible effect of other factors, such as poor hygienic conditions in the home, or other personal conditions, must be considered, and when discoverable should be noted under *additional factors*.

E. F. McCAMPBELL, M. D., Secretary.

## OHIO STATE BOARD OF HEALTH

CERTIFICATE OF INDUSTRIAL DISEASE

NAME OF PATIENT

ADDRESS: Street and No.

City or Village

B.—Every item of information should be carefully supplied. The exact statement of OCCUPATION is PHYSICIANS should state DIAGNOSES in plain terms. See instructions on back of certificate.

WRITING PLAINLY WITH INK—THIS IS A PERMANENT RECORD

# OHIO STATE BOARD OF HEALTH

COLUMBUS

Smithsonian Institution  
JUN 3 1916  
614

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- (a) Name, address and occupation of patient. (b) Name, address and business of employer. (c) Nature of disease.

(d) Such other information as may be reasonably required by the State Board of Health. The reports herein required shall be made on, or in conformity with, the standard schedule blanks hereinafter provided for. The mailing of the report, within the time required, in a stamped envelope addressed to the office of the State Board of Health, shall be a compliance with this section.

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SECTION 7. Every physician \* \* \* \* finding what he believes to be symptoms of lead poisoning shall \* \* \* \* within forty-eight hours after such examination and finding \* \* \* \* send a report thereof in duplicate, one copy to the State Department of Factory Inspection and one to the State Board of Health. \* \* \* \* The examining physician shall also, within the said forty-eight hours, report such examination and finding to the employer. (Passed April 18, 1913.)

These forms are furnished by the State Board of Health and should be used for all reports. In filling out, note carefully the instructions below.

### INSTRUCTIONS FOR FILLING OUT CERTIFICATE

**In General.** The *medical certificate* on the right hand side the physician alone can furnish. The *personal and statistical particulars* on the left hand side must be secured by the physician either from the patient, or, in fatal cases, from the family precisely as for similar information in certificates of death sent to boards of health.

**Present Occupation.** Precise statement of occupation is very important so that the relative healthfulness of various pursuits may be known. It is necessary to know both general trade or profession (for example, *printer* or *brass worker*) and also the particular kind of work or branch of the trade (as *hand compositor* or *hototype operator* for a printer, or *polisher* or *buffer* for a brass worker).

*Date of entering present occupation* is important to determine how long the worker may have been exposed to the hazard before contracting the disease.

*Employer's name, address and business* are necessary to ascertain distribution of occupational diseases by industries, many trades (e. g., machinists) being common to different industries.

**Previous Occupations** need to be known, if possible, because present illness may be due to a former rather than present occupation, and industrial disease is frequently a cause of change of

occupation. Give simply the name of each distinct occupation which the patient may have followed, with the year he entered and the year he left.

**Previous Illnesses.** This refers either to previous attacks of present disease, or to any other disease, *due to occupation*. All that is required is the name of each such disease or illness with the year in which it occurred. Such information, when it can be secured, will show whether the case reported is the first attack or not, and when combined with statement of previous occupations, will afford an outline history of the patient as to occupational disease.

**Medical Certificate.** Only the last two items specified for this require any explanation. In making these reports it is necessary to consider the possible influence of factors other than occupation as causes of the disease. For this reason any *complicating diseases* should be noted, such, for example, as alcoholism or syphilis in connection with arteriosclerosis in cases of lead or other metal poisoning. The possible effect of other factors, such as poor hygienic conditions in the home, or other personal conditions, must be considered, and when discoverable should be noted under additional facts.

E. F. McCAMPBELL, M. D., Secretary.



# OHIO STATE BOARD OF HEALTH

COLUMBUS

## AN ACT — To Require the Reporting of Certain Occupational Diseases — (Passed March 25, 1913.)

Section 1. Every physician in this state attending on or called in to visit a patient whom he believes to be suffering from poisoning from lead, phosphorus, arsenic, brass, wood-alcohol, mercury or their compounds, or from antifax, or from compressed-air illness, or any other ailment or disease, contracted as a result of the nature of the patient's employment, shall within forty-eight hours from the time of first attending such patient send to the State Board of Health a report stating:

- (a) Name, address and occupation of patient. (b) Name, address and business of employer. (c) Nature of disease.

The reports herein required shall be made on, or in conformity with, the standard schedule blanks hereinafter provided for. The mailing of the report, within the time required, in a stamped envelope addressed to the office of the State Board of Health, shall be a compliance with this section.

Section 3. Reports made under this act shall not be evidence of the facts therein stated in any action arising out of the disease therein reported.

### AN ACT — For the Prevention of Occupational Diseases with Special Reference to Lead Poisoning.

Section 7. Every physician \* \* \* \* finding what he believes to be symptoms of lead poisoning shall \* \* \* \* \* within forty-eight hours after such examination and finding \* \* \* \* \* send a report thereof in duplicate, one copy to the State Department of Factory Inspection and one to the State Board of Health. \* \* \* \* \* The examining physician shall also, within the said forty-eight hours, report such examination and finding to the employer. (Passed April 18, 1913.)

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E. F. McCAMPBELL, M. D., Secretary.

## OHIO STATE BOARD OF HEALTH

CERTIFICATE OF INDUSTRIAL DISEASE

NAME OF PATIENT

ADDRESS: Street and No.

City or Village

N.B.—Every item of information should be carefully supplied. The exact statement of OCCUPATION is very important. Physicians should state DIAGNOSES in plain terms. See instructions on back of certificate.

WRITE PLAINLY WITH INK—THIS IS A PERMANENT RECORD

# OHIO STATE BOARD OF HEALTH

## COLUMBUS

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E. F. McCAMPBELL, M. D., Secretary.

# *614.*

# PRINTER'S AVOID CONSUMPTION AVOID LEAD POISONING

CONSUMPTION causes 29 out of every 100 deaths among printers. Stagnant air, fumes, gases, lead poisoning, lack of exercise, and forgetting to breath deeply (100 times each day) are the main reasons.

Hoods must be placed over linotype METAL POTS, and have pipes connecting, and leading out



# PRINTERS

## AVOID CONSUMPTION AVOID LEAD POISONING

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Hoods must be placed over linotype METAL POTS, and have pipes connecting, and leading out of doors.

Remember, pig-lead used in LINOTYPING is softer than lead of type. Handle it as little as possible. Then keep fingers away from mouth and lips.

Drop pig-lead carefully into melting pot. SPLASHINGS of molten lead dry later and become lead dust.

Do not shake crucible in order to blend MOLTEN LEAD better. It will blend of itself.

PLUNGERS on linotype machines should never be cleaned in the work room. Clean them in boxes in the open air. Avoid inhaling the dust.

GRAPHITE used for lubricating is not poisonous, but all dust is irritating to the lungs.

Avoid LEAD DUST, as much as possible, when trimming and mitreing, or when sawing.

Remove LEAD DUST from type cases in the open air, or by means of a vacuum cleaner.

Never put TYPE into the mouth, or moisten fingers to get hold of type.

Benzine and other cleaners occasionally contain DEADLY POISONS, which poison if gotten onto the skin or when inhaled.

Insist upon having GOOD VENTILATION in the office or factory, and insist that FLOORS SHOULD NOT BE SWEPT during working hours.

Suggest to your employer that walls and ceilings of work room, if not of smooth, WASHABLE SURFACE, should be lime-washed once a year; that close-fitting floors which can be cleaned by moist methods are desirable; and that type-cases should fit closely on the floor, or have legs high enough to brush under.

Eat a good breakfast before beginning work. Food in the stomach, especially MILK, helps to prevent lead-poisoning.

Do not eat FOOD or use TOBACCO, while at work, until you have washed your hands, because of the danger of actually feeding lead to yourself. Do not use a "common" DRINKING CUP; such a cup may be employed by a tuberculous or otherwise infected person. Wash hands thoroughly with warm water and soap. Have your own towel and soap. Rinse the mouth and clean the fingernails before eating. Don't use fingernails for TOOTHPICKS.

Don't spit on the floor. Use CUSPIDORS and see that they are cleaned daily.

Eat your LUNCH outside of the work room.

Do not wear WORKING CLOTHES too long without change.

Hang STREET CLOTHES where they will not be exposed to the dust of the work room.

Gas and electric lights should be shaded to prevent a glare. The EYES should be EXAMINED from time to time by a competent physician. Avoid ruining your sight by giving early attention to eye-strain. Headaches, blurred vision, red and inflamed eyes, dancing spots before the eyes, twitching of the eye-lids, are some of the first signs of eye-strain.

Insufficient LIGHT may impair the general health.

BATHE frequently, and brush the TEETH each night.

Avoid ALCOHOL. It increases the danger of lead-poisoning.

Have a good BOWEL MOVEMENT each day.

EXERCISE in the fresh air as much as possible.

BE EXAMINED BY A DOCTOR occasionally to protect yourself against the effects of your trade.

ISSUED JANUARY, 1916

Division of Industrial Hygiene  
Ohio State Board of Health

E. F. McCAMPBELL, Ph.D., M.D.

Secretary and Executive Officer

COLUMBUS, OHIO



Smithsonian Institution  
JUN 8 1916  
U.S. GOVERNMENT PRINTING OFFICE

# Instructions to Employees in Dusty Trades

## DANGERS OF DUST

1. Don't breathe dust of any kind—it causes colds, consumption and pneumonia.
2. Don't sweep during working hours—it spreads germs of all kinds.
3. Don't work in dusty air. Stop the dust or wear a dust protector over your mouth and nose.
4. Dust breathed into your lungs is never breathed out again.
5. If you breathe dust you are bound to cough.
6. Coughing or spitting is nature's warning that your lungs are in danger.
7. If you hem or cough every day see a doctor at once.

OHIO STATE BOARD OF HEALTH  
E. F. McCampbell, Ph.D., M.D.  
Secretary and Executive Officer



# NOTICE:--INSTRUCTIONS TO EMPLOYEES

## HOW TO PREVENT LEAD POISONING

- (1) All workers exposed to *lead dusts, lead fumes, lead solutions and lead compounds* are liable to poisoning. These poisons get into the body through the nose while breathing, or through the mouth when chewing, or swallowing, or wetting the lips.
- (2) Do all you can to *keep down dust*. When sweeping or cleaning, always dampen with water, oil or wet sawdust. Where dust can not be kept down, you must wear a respirator. This must be cleaned out at least once a day.
- (3) Eat breakfast before going to work. Drink milk at meals, and if possible once between meals. Do not eat meals in workroom. Leave workroom at meal times.
- (4) Keep *dirty fingers* out of your mouth, and off of your food, and whatever goes into your mouth. Wash hands, arms and face with warm water and soap before eating, going to the toilet, or quitting the workroom. Clean your lips and rinse out your mouth before eating or drinking.
- (5) A *mustache*, if worn, must be kept short. Do not wear a *beard*. Keep *fingernails* clean and cut short, also loose skin about the nails or hands.
- (6) Do not chew tobacco or gum while at work. Avoid the use of intoxicants in any form, as they promote lead poisoning.
- (7) Take a *full bath* with warm water and soap at least twice a week.
- (8) You must wear *overalls and jumpers* while at work. Wear a cap if exposed to dust or fumes. Do not wear your working clothes outside of the working place.
- (9) Keep your *bowels* moving if possible once a day. Report to your foreman if you notice (1) loss of appetite, (2) poor sleep, (3) indigestion, (4) continual constipation, (5) vomiting, (6) pains in stomach, (7) dizziness, (8) continual headache, or (9) weakness in arms, limbs or body.

NOTE: Lead poisoning brings on Paralysis of the wrists and arms, hardens the arteries, causes chronic diseases, and hastens old age and death. **WORKMAN, PROTECT YOURSELF.** Your employer and the Board of Health cannot do all for you. **OBSERVE THE ABOVE PRECAUTIONS.**

OHIO STATE BOARD OF HEALTH,

E. F. McCAMPBELL, Ph.D., M.D.,

Secretary and Executive Officer.

Columbus, Ohio.



# PAINTERS

## Avoid Lead Poisoning MOST PAINTS, FILLERS AND SOME DRYERS CONTAIN LEAD

Lead does not get into the body through the skin. It gets in through the nose or mouth. Hence it should be easy to avoid lead poisoning.

Furthermore, 19 out of every 100 deaths among painters are due to CONSUMPTION. Twice as many painters die of consumption as carpenters. Undoubtedly working with poisons causes the difference. Poisons predispose to consumption.

Eat a good breakfast before beginning work. A FULL STOMACH lessens the danger of lead poisoning.

MILK is the best antidote for lead. Drink it at lunch or during the day.

Do not put food or tobacco into your mouth with dirty FINGERS. In other words, do not feed lead to yourself.

RINSE OFF LIPS before eating or drinking. Keep mustache short so as not to touch your food or drink. A mustache is a danger since it collects dust.

Wash HANDS thoroughly with warm water and soap before eating whenever you can. Otherwise hold sandwiches, pie, etc., between clean pieces of paper.

Eat your LUNCH outside of the room or place where painting or sanding is done.

Keep fingernails clean. Do not use them for TOOTHPICKS.

It is a good plan to rinse out your mouth before eating or drinking.

When sanding avoid breathing the DUST or allowing it to settle on your lips. Wear some sort of a respirator which will keep you from breathing the dust.

While SANDING do not chew tobacco or gum. The chewing movements always cause a little swallowing which YOU DO NOT NOTICE. Licking the lips, chewing and this "little swallowing" causes the most of lead poisoning.

Do not moisten your lips with your tongue. Each time you lick in some lead particles which have settled on your lips.

Prevent DUST as much as possible. Look out for dirty, dusty drop-cloths. Do not shake them.

When possible do sanding with a little MINERAL OIL present to absorb the dust. Such oil is cheap and can be used on almost any kind of work.

Do not put tobacco in outside POCKETS where dust collects. Such dust usually contains some lead.

Brush your TEETH at least in the morning and at night, the latter before going to bed.

Avoid ALCOHOLIC DRINKS — they make you more liable to lead poisoning.

Do not use a dirty cloth or rag to wipe off your face, nose or lips.

Have a good BOWEL MOVEMENT each day — best time is just after breakfast. Make the habit regular.

Hang street CLOTHES away from the paint and dust of the work place.

Have overalls and jumpers washed at least once a week.

Painters should get a good bath at least once a week, and use plenty of SOAP.

Remember also that all DRYERS and PAINT REMOVERS are very poisonous. Do not breathe their fumes or odors in a closed-up space. Have good ventilation.

TURPENTINE damages the kidneys sooner or later.

BE EXAMINED BY A DOCTOR OCCASIONALLY.

### SYMPTOMS:

Have you ever had rheumatism, kidney, stomach, or heart trouble? Each may be due to lead.

#### Some SYMPTOMS of actual LEAD POISONING:—

Cramps in stomach or bowels	Pains in joints or back
Constipation	Numbness of arms or fingers
Bluish lines on gums	Weakness of wrist or toe
Diarrhoea	Acting strangely
Nausea	Tremors
Foul taste in mouth	Dizziness or dizzy spells
Severe headache	Nervousness
Loss of weight	Pallor
Loss of strength	Wrist-drop or "palsy"

ISSUED JANUARY, 1916

Division of Industrial Hygiene

OHIO STATE BOARD OF HEALTH

E. F. McCAMPBELL, Ph.D., M.D.

Secretary and Executive Officer

COLUMBUS, OHIO



## II. AVOID DANGERS TO HEALTH — Know What They Are. Here are some of them and their limits:

1. The AIR in most buildings heated by stoves, furnaces, steam or hot water is stagnant, too hot and too dry — drier than that of the Sahara Desert. Hence sore throats, colds, and many forms of sickness.

### GOOD AIR:

CIRCULATES — and by so doing tones up the human system by striking the skin, thus improving the blood-flow, and removing the "envelope of heat" which is given off by the body and constantly surrounds it. Use electric fans or cloth-windows or window-boards or ventilators. A just perceptible "breath" is enough (or air blowing 5 to 10 feet per second).

Has RELATIVE HUMIDITY of 45 to 65%. Learn the use of the wet-bulb thermometer. When not too cold, proper moisture can be had by admitting outdoor air (note cloth-windows). It may take 10 to 20 gallons of water per day for a six-room house. Few, if any, pan and water schemes will evaporate this amount of water.

Has a TEMPERATURE (indoors) of from 60 to 68° F. This temperature feels perfectly comfortable when the air is properly moistened — it also saves on the coal bill.

Has no irritating FLOATING PARTICLES — dust, smoke, etc.

Has no noticeable GASES, FUMES OR VAPORS — these are especially dangers of modern industries. Any ODOR should be pleasant — the air should be just like that supplied by Nature.

Not POLLUTED by disease germs. Most so-called "air-borne diseases" are really caught by contact with, or close approach to, persons carrying the germs. Such "carriers" may not themselves be sick and also may be in total ignorance of their own menace. Avoid touching persons as much as possible. Keep beyond the breathing range, and, finally, wash your hands often to prevent carrying disease to your face and mouth.

### 2. GOOD ILLUMINATION means:

STEADY LIGHT from over the shoulders — 5-10 foot-candles of ARTIFICIAL light for ordinary eye work, 5 f. c. in foundries and similar places, and 3 f. c. on the floors of general workrooms. Daylight COLOR is the best. DAYLIGHT should be three times stronger than artificial light. (A foot-candle is the amount of light given by a standard candle one foot away).

Absence of sharp contrasts of lights and shadows; have light-colored walls and ceilings to reflect light instead of absorbing it; unobstructed light, as from the upper half of windows — dirty windows may obstruct 4/5 of the light, while dark shades should not be used in workrooms, offices, or schools; protection of the eyes against brilliant and hot lights.

GOOD EYE-SIGHT — perhaps, after all, your eye-sight is defective and your eyes need examining — most headaches are from eyestrain — eyestrain may be as fatiguing, also, as the most arduous work.

3. POISONS. Workers with poisons should be properly instructed in their use. The COURTS have decided that the responsibility of such instruction rests upon the employer. In Ohio the State Department of Health stands prepared to issue INSTRUCTIONS for the avoidance of poisoning of all sorts. Most poisonings occur because employers and workers both CONSIDER the substances dealt with as too innocent to cause much harm. This attitude has unfortunately caused an immense amount of sickness, numerous deaths, and many LAW SUITS for large amounts of money. The State Laboratories will analyze suspected poisons used in connection with work, provided the sources, uses and reasons for the analyses are stated. The Department of Health will also supply INFORMATION as to the maximum amount of poisonous substances which can be present in the air or may be taken into the system without causing symptoms — This insofar as it has information or can secure the same. By law, all instances of poisoning in connection with work must be brought TO THE NOTICE of the State Department of Health, which Department furnishes the proper blanks for recording the information and investigates the occurrence with a view to finding out how to avoid similar mishaps. Such reports cannot be used as evidence of the facts therein in any action arising out of the disease

therein reported. Most poisonings occur through workers poisoning themselves, which is due to IGNORANCE or DISREGARD of instructions, but upon the employer rests the responsibility of supervision. The more COMMON POISONS used in the State of Ohio are about in order of their frequency of use and their liability to produce occupational disease: lead, benzine and benzol (naphtha, petrol, gasoline, etc.), turpentine and similar dryers, brass or zinc in the form of fumes; acids, alkalis, wood alcohol, anilin oil, carbon bisulphide, antimony, illuminating and fuel gas, sulphurated hydrogen, arsenic, phosphorus and mercury.

4. **FATIGUE.** A tired feeling is nature's warning to rest. Getting tired depends largely upon who you are and how well you may be. Work should promote health and a sense of well-being. "So tired" should never be heard at the end of a day's work, as it signifies exhaustion. All straining or heavy or rapid work should be tempered or subjected to changes so that no feeling of exhaustion results. This applies to the eyes, or to the hands, as well as to the whole body. True "Scientific Management" observes these principles and makes use of several methods of doing routine work. On the other hand, TOO LITTLE EXERCISE is a serious danger to large numbers of persons who are not actively employed. Variation, which will allow exercise, is the secret of efficiency and steadfastness. The best standard for fatigue or inactivity is that "tired feeling". Avoid it.
5. **TEMPERATURE.** The exposure to heat produces thermic fever if the temperature goes beyond that of the human body ( $98.6^{\circ}$ ); beyond this, prostrations, muscular cramps and anemia are produced. Premature old age is a common result. When COMBINED WITH MOISTURE the effects upon the health are very much worse. For the best work, neither the wet nor dry thermometer should exceed  $70^{\circ}$  F. The shower-bath is a most excellent way to control the circulation of the blood upon quitting the hot workplace preparatory to going outside. In almost all trades heat can be controlled or kept away from workmen. EXPOSURE TO COLD, pure and simple, is not dangerous to health provided enough clothing is worn and enough active work is performed. Cooling one part of the body while heating another is bad.
6. **DIRT AND DISORDERED SURROUNDINGS** are dangerous to health because they favor disease, obstruct light, make one less inclined to do a high class of work; also to observe health standards, correct habits and good morals, whether at home, at work, or elsewhere.
7. **THE NATURAL DESIRES** create great risks to health—
  1. THIRST must be supplied with safe drinking water.
  2. HUNGER must be supplied with clean, nourishing food eaten in a place free from poisons.
  3. TOILETS, URINALS, SEWERAGE and GARBAGE devices must not engender disease.
  4. SLEEP must not be disturbed and must last eight hours every night.
  5. RECREATION must not be dissipative but recreative.
  6. The desire for STIMULANTS is always abnormal to the healthy person; when present it is usually due to the effects of some of the dangers above cited or to a habit acquired through ignorance or bravado. Stimulants include alcohol, coffee, tea and certain drugs.
  7. Make the day the routine of life — don't try to catch up on Sundays only.

- IV. **THE LAST FACTOR** in the cure of this national health decline is that of providing for the cases of sickness which occur. It is **THE RELIEF SCHEME**. Just as we have accident insurance in order to compensate for accidents we should have sickness insurance in order to compensate for sickness. It is best to call this "HEALTH INSURANCE" for we wish to maintain health. Such insurance is the real active agent in bringing persons to observe the Laws of Health, to have Physical Examinations made and to see that their Surroundings are Healthful. To bring this about the insurance should be supported by the worker (2/5), by the employer (2/5), and by the state (1/5). By this means every one is financially interested in prolonging health, increasing efficiency and maintaining a high standard of production.

**WORK SHOULD PROMOTE HEALTH, NOT DESTROY IT**

### III. AVOID DANGERS TO HEALTH — Know What They Are. Here are some of them and their limits:

1. The AIR in most buildings heated by stoves, furnaces, steam or hot water is stagnant, too hot and too dry — drier than that of the Sahara Desert. Hence sore throats, colds, and many forms of sickness.

#### GOOD AIR:

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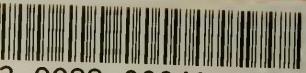




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